Amendments to the Claims

Please amend claims 1-13 and add new claim 14 as shown in the following listing of claims. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) Demodulator arranged to demodulate a first signal with the aid of a second signal, the demodulator comprising:

a first bandpass ~~(30)~~ filter arranged to recover the first signal ~~(36)~~ from a received signal ~~(10)~~; and

a second bandpass filter ~~(32)~~ arranged to recover the second signal ~~(36)~~ from a received signal ~~(10)~~;

in which the passband of the second bandpass filter ~~(32)~~ is substantially narrower than the passband of the first bandpass filter ~~(30)~~.

2. (currently amended) Demodulator according to claim 1, wherein the demodulator comprises compensation means ~~(40,50)~~ for compensating phase error between the recovered first ~~(36)~~ and second ~~(38)~~ signals.

3. (currently amended) Demodulator according to claim 2, wherein the compensation means comprises a delay element ~~(4)~~ that is arranged to delay the recovered first signal ~~(36)~~.

4. (currently amended) Demodulator according to claim 2, wherein the compensation means comprises a phase shifter ~~(50)~~ that is arranged to shift a phase of the recovered first signal ~~(36)~~, the phase shift being dependent upon the phase difference between the recovered second signal ~~(38)~~ and a reference signal ~~(51)~~.

5. (currently amended) Demodulator according to claim 4, wherein the compensation means comprises a selector ~~(31)~~ that is arranged to select the reference signal ~~(51)~~ from at least two sources.

6. (currently amended) Demodulator according to claim 5, wherein the selector ~~(31)~~ is a programmable selector.

7. (currently amended) Demodulator according to claim 5, wherein one of the at least two sources is a demodulated first signal ~~(18)~~.

8. (currently amended) Demodulator according to claim 5, wherein one of the at least two source is an image of a demodulated first signal ~~(18)~~ which is stored in memory means ~~(35)~~.

9. (currently amended) Demodulator according to claim 8 wherein, the memory means ~~(35)~~ comprises an analogue to digital converter arranged to provide a digital image of the demodulated first signal.

10. (currently amended) Demodulator according to claim 1 wherein the demodulator further comprises a phase locked loop ~~(60)~~ for stabilizing the recovered second signal ~~(38)~~.

11. (currently amended) Demodulator according to claim 1 wherein the recovered second signal ~~(38)~~ is used for frequency down converting at least a third signal ~~(73)~~.

12. (currently amended) Apparatus ~~(88)~~ comprising a demodulator ~~(82)~~, the demodulator being arranged to demodulate a first signal ~~(36)~~ with the aid of a second signal ~~(38)~~, the demodulator comprising:

a first bandpass filter ~~(30)~~ arranged to recover the first signal ~~(36)~~ from a received signal ~~(10)~~; and

a second bandpass filter ~~(32)~~ arranged to recover the second signal ~~(38)~~ from the received signal ~~(10)~~;

in which the passband of the second bandpass filter ~~(32)~~ is substantially narrower than the passband of the first bandpass filter ~~(30)~~.

13. (currently amended) Method for demodulating a first signal with the aid of a second signal the method comprising the steps of:

using a first bandpass filter ~~(30)~~ for recovering the first signal ~~(36)~~ from a received signal ~~(10)~~;

using a second bandpass filter ~~(32)~~ having a substantially narrower passband than the first bandpass filter ~~(30)~~, for recovering the second signal ~~(38)~~ from the received signal ~~(10)~~.

14. (new) Demodulator according to claim 1 further comprising a mixer connected to the first and second bandpass filters to mix the first signal and the second signal.